

Farm Produce Chilling without Diesel Generator Backup



Promethean’s CSS is the most economical way to chill, store and transport fresh fruits, vegetables and other perishables. Chilling the fresh produce immediately at the source is the most optimal solution to India’s cold-storage challenge. This stationary cooling system can chill farm produce under erratic grid conditions without requiring a diesel generator.

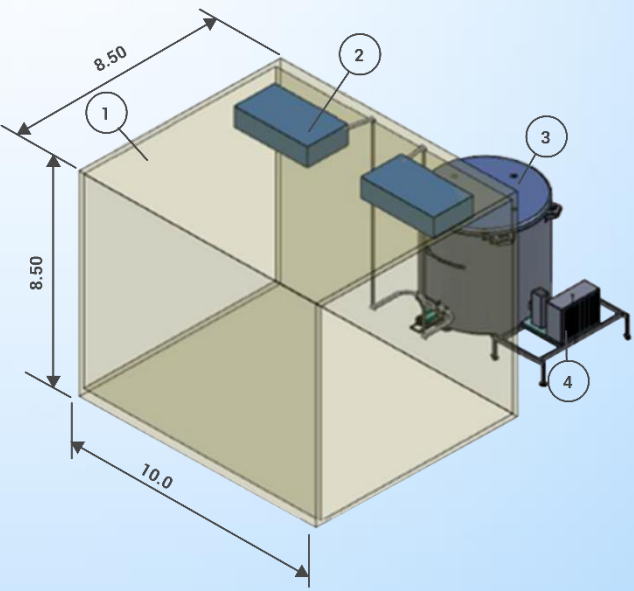
At the heart of the CSS is Promethean’s **Thermal Storage System** that can store and release large amounts of thermal energy and can be applied to various cooling applications.

| Feature | Benefits |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cooling farm produce at the source | <ul style="list-style-type: none"> • First cool then transport principle enables longer shelf life and higher margins on quality produce • Capture more farmers in the catchment area. • Eliminates post harvest losses. |
| Cold Storage Backup | <ul style="list-style-type: none"> • Eliminates diesel generator. • Low maintenance & operating costs. • Unlike electrical batteries, thermal battery does not need to be replaced every 3 to 5 years. |
| Simple flexible Design | <ul style="list-style-type: none"> • Single phase connection at farms • Easy to operate |

OUR TSS

The TSS is the energy storage technology which provides cold energy for all of Promethean’s refrigeration products:

- **Backup cooling power** - for areas with unreliable grid power
- **Instant cooling power** - for rapid cooling of fruits, vegetables, milk and other perishable food products
- **Load shifting** - from day-time to night-time to reduce energy bills



| Component # | Component |
|-------------|------------------------|
| 1 | Cooling Chamber |
| 2 | Fan Coil Units |
| 3 | Thermal Storage System |
| 4 | Chiller Unit |

| Description | Specification | Units |
|-----------------------------------------------------------------|---------------|---------|
| Compressor Model | ZB-21 | |
| Average Cooling Power | 5 | kW |
| Minimum Grid Hours Required for 1 charge | 4-5 | Hours |
| Quantity of Produce | 2.5 | Tons |
| Room Size | 640 | Cu. Ft. |
| Battery Back-Up Capacity with 100% charge (Ambient to 4 deg C) | 10-12 | Hours |
| Battery Back-Up Capacity with 100% charge (Maintaining 4 deg C) | 20 | Hours |
| Output Temperature Range | 4 and above | Deg C |
| Floor Area Required | 150 | Sq. Ft. |
| Single Phase Electrical Connection | 6.5 | HP |